



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/521,025

07/26/2005

Hae-Wook Lee

8947-000122/US

9491

30593

7590

01/26/2009

HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

JACKSON, MONIQUE R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

01/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,025	Applicant(s) LEE ET AL.	
	Examiner Monique R. Jackson	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/26/05, 11/14/08</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1794

DETAILED ACTION

1. The amendment filed 10/9/08 has been entered. Claims 1-36 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. The specification remains objected to for the reasons recited in the prior office action. Though the Applicant made minor changes in the three paragraphs in the amendment filed 10/9/08, the Examiner notes that the specification still contains several other errors and misspellings that have not been corrected.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-4, 6, 8, 10, 12-15, 17, 19-24, 26-28, 31, 33, and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3, 6, 8, 10, 12, 14, 15, 17, 19, 21, 24, 31, 33 and 34 appear to include a range in values with the character "~" in between the values, however, as previously stated, given that the character "~" is typically utilized to mean approximately, it is unclear what the character means within the range.

5. Claim 2 remains indefinite for the reasons recited previously wherein the claim amendment is still not in proper alternative format.

6. Claims 9-15, 20-24, and 30-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

Art Unit: 1794

applicant regards as the invention. Claims 9, 11, 20 and 30 utilize the terms “anti-hydrolic” and “hydrolic” which were previously noted as unclear. These words are not English terms and have not been defined in the specification. Further, Claims 23 and 35 still recite the term “series” wherein it is unclear what is meant to be encompassed by the term “series” and Claim 11 still has misspelled resin names.

7. Claim 28 remains rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 still recites “pencil intensity” and “heat-ray cut off rate of 50%” which have not been defined by the claims or the specification.

Claim Rejections - 35 USC § 102

8. Claims 1-23, 25-26, and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Kunimatsu et al (USPN 5,807,511) for the reasons recited in the prior office action wherein the Examiner again notes that Kunimatsu et al specifically discloses ethylene glycol monoethyl ether as a solvent as utilized in the examples (see Table 1.)

9. Kunimatsu et al teach a composition for forming a near infrared screening filter and the filter formed from the composition wherein the composition comprises a binder including resins that read upon the instantly claimed resins such as alkyd resins, acrylic resins, polyester resins, urethane resins, wherein the binders may be cold-setting, bake-curing, ultraviolet-curing or freeze-defreeze curing; a metal oxide or inorganic oxide powder having a particle size of at most 0.2 μm (200nm), preferably ITO, ATO or mixture thereof; a dye; a solvent such as those listed in Col. 4, lines 42-54, including ethers such as ethylene glycol monoethyl ether as utilized in the examples; and a dispersant such as an acid dispersant (Entire document.) Kunimatsu et al teach

Art Unit: 1794

that the blending ratio of the binder, oxide powder and dye is preferably 100:1 to 100:0.01 to 5, and more preferably 100:5 to 50:0.02 to 2, by weight (Col. 4, lines 22-27) and the amount of solvent is optionally determined taking e.g. coating operation efficient into consideration but is usually such an amount that the solid content of the composition is from 10 to 100wt% (Col. 4, lines 55-58.) Kunimatsu et al specifically teach that the ATO includes 0.1 to 20wt% of Sb, and the rest is substantially tin oxide (Col. 3, lines 32-41.) Kunimatsu et al also teach that the composition can be applied or coated directly to a substrate from which near infrared rays are desired to be cut off and curing the coating to form a cured coating film on the substrate, such as made of glass or plastic, for use in such applications as windows or improving the thermal efficiency of an air conditioner (Col. 1; Col. 4, line 59-Col. 5, line 15.) Kunimatsu et al further teach examples that read upon the claimed invention including (Examples 1-4.)

Claim Rejections - 35 USC § 103

10. Claims 24, 27-28 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunimatsu et al. The teachings of Kunimatsu et al are discussed above. Though Kunimatsu et al teach the use of ultraviolet radiation to cure the coating composition, Kunimatsu et al do not specifically teach the instantly claimed curing conditions however one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum curing conditions for a particular coating composition wherein the claimed conditions are well within typical conditions utilized in the art. With respect to the film thickness and properties listed in Claims 27 and 28, one skilled in the art would have been motivated to determine the optimum film thickness and optimum coating composition within the ranges taught by Kunimatsu et al for a particular end use, wherein the claimed film properties

Art Unit: 1794

would flow naturally from the teachings of Kunimatsu et al given that the compositions are the same as claimed. Lastly, with respect to Claim 36, though Kunimatsu et al teach that the coating composition can be utilized in various applications and on various substrate materials from which near infrared rays are desired to be cut off or thermal efficiency is desired, Kunimatsu et al do not specifically teach a vessel containing drinking water or foods as claimed, however, such use would have been obvious to one having ordinary skill in the art.

Response to Arguments

11. Applicant's arguments filed 10/9/08 have been fully considered but they are not persuasive. The Applicant argues that Kunimatsu et al fails to teach an amphiphilic solvent and only teaches hydrophilic solvents wherein ethylene glycol is a hydrophilic solvent different from ethylene glycol monoethyl ether which is an amphiphilic solvent. However, the Examiner notes that Kunimatsu et al specifically teaches **ethylene glycol monoethyl ether**, not just ethylene glycol, and hence Applicant's arguments are not persuasive.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 1794

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
January 20, 2009